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Remarks

This communication is considered fully responsive to the first Office Action mailed February 26, 2007. Claims 1-21 were examined. Claims 1-21 stand rejected. Claims 1, 5, 6 and 10 are amended. No claims are canceled. No new claims have been added. Reexamination and reconsideration of the pending claims are respectfully requested.

Claim Rejections - 35 U.S.C. 102(b)

The Office Action rejected claims 1-21 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,664,179 to Danko, et al. ("Danko"). Applicant respectfully traverses this rejection.

Danko is directed to a machine for testing the strength of material where points of a specimen (referred to in the art as "coupons") are tested. In general, Applicant claims accelerated design life testing of a structure, wherein the stresses are distributed along the length of the structure. These and other differences with the prior art are discussed in more detail below with reference to the claims.

Claim 1 positively recites "operating said actuator to reciprocate said mass along the linear displacement path at a reciprocating sinusoidal frequency" (emphasis added). This amendment is supported by the original claims and merely seeks to clarify that a reciprocating frequency is a sinusoidal frequency. Danko fails to teach or suggest at least these recitations.

Danko discloses that the "periodically varying signal supplied to operate the servo valve is in the form of a pulse train having a particular amplitude and duty cycle" (*see* col. 3, lines 59-61). A resonant frequency generated by a pulse train is not the same as a reciprocating frequency, which must be generated by a sin wave. Indeed, Danko prefers the use of "a pulse train *rather than a sinusoidally varying signal*" (*see* col. 3, lines 67-70; emphasis added).

Danko also discloses "the pulses are directly supplied in ydraulic form to hydraulic actuator 14 . . . which *causes the specimen 26 to be loaded about the mean load value* at or near the resonant frequency of the specimen-mass system" (*see* col. 4, lines 25-30; emphasis added). But, Danko fails to disclose reciprocating a mass along the linear displacement path at a reciprocating sinusoidal frequency. It is also apparent from Figure 1 in Danko that the specimen 26 is not being loaded along the linear displacement path at a reciprocating frequency.

It is further noted that although Danko shows sin waves in Figures 4 and 5, these correspond to the force function (e.g., 155, 156) and feedback signal (e.g., 158 and 104), and not the load function (e.g., pulse train commend 162).

For at least the foregoing reasons, claim 1 is believed to be allowable over Danko and Applicant respectfully requests withdrawal of the rejection of claim 1.

Claims 2-9 depend from claim 1, which is believed to be allowable. Therefore, claims 2-9 are also believed to be allowable for at least the same reasons as claim 1.

In addition, claim 3 further recites "wherein the feedback signal produced by said feedback sensor is related to a strain in the specimen." The Office Action relies on the DC component in Danko (col. 5, lines 15-27) as disclosing this recitation. Here Danko discloses "a DC component proportional to the mean load on specimen 26" (emphasis added). The DC component, as described here, is used to measure the mean load, and does not have anything to do with strain. Accordingly, the rejection of claim 3 is in error.

Likewise, claim 4 further recites "wherein the feedback signal produced by said feedback sensor is related to an acceleration of the specimen." The Office Action relies on the AC component in Danko (col. 5, lines 15-27) as disclosing this recitation. Here, Danko discloses "an AC component corresponding to the time varying load on speciment 26" (emphasis added). The AC component, as described here, is used to measure the amount of force

being applied, and does not have anything to do with acceleration. Accordingly, the rejection of claim 4 is in error.

Claim 5 is amended to clarify the "load frame mounted directly to the specimen, said actuator being mounted to said load frame." Support for this amendment is found, e.g., in the Figures. The Office Action relies on the floor F in Danko as being a load frame. Even if the floor can be considered a load frame, the load frame is not mounted directly to the specimen.

Claim 6 is amended to clarify that "the roximal end of said linear hydraulic actuator being mounted to said mass so that the mass moves independently of the specimen." Support for this amendment is found, e.g., in the Figures. Again, the Office Action relies on the floor F in Danko as being a load frame. Even if the floor can be considered a load frame, the mass 24 does not move independently of the specimen 26.

Claim 7 recites "said transverse load actuator applying to the specimen a load in a transverse direction, said transverse direction being substantially orthogonal to the longitudinal axis of the specimen and to the linear displacement path" (emphasis added). The Office Action relies on the servo controller 31 in Danko as disclosing this recitation. Applicant fails to appreciate how anything in Danko, much less the servo controller 31, would be able to apply a load substantially orthogonal to the longitudinal axis of the specimen (*see* e.g., Figure 1 in Danko).

For at least the foregoing reasons, withdrawal of the rejection of claims 209 is respectfully requested.

Claims 10-21 were rejected for similar reasons as claims 1-9. Therefore, Applicant believes claims 10-21 are allowable for at least the same reasons as stated above for claims 1-9, and withdrawal of the rejection of claims 10-21 is respectfully requested.

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Conclusion

The Applicant respectfully requests that a timely Notice of Allowance be issued in this matter.

Respectfully Submitted,

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